

“A Legacy of Strategic Growth”
2008 State of the Institute Address
Georgia Tech Interim President Gary B. Schuster
October 2008

TITLE SLIDE: A LEGACY OF STRATEGIC GROWTH

It is my honor as your Interim President to report on the state of the Georgia Institute of Technology, and to speak to the challenges and opportunities that lie ahead for this academic year and beyond.

Being ranked the nation’s seventh best public university for the second year in a row implies an exceptional level of achievement, and that has certainly been true of the past year. I do not have time today to cite all of the outstanding accomplishments of the past year – nor would you have time to sit and listen to that long list. However, some of the highlights are captured in this little brochure, and I hope you will take time to review it. Taken together, these highlights illustrate that Georgia Tech is truly a remarkable place.

SLIDE: CLOUGH

We concluded the 2007-08 academic year by bidding farewell to President Wayne Clough and his wife Anne. And in the course of looking back over the past 14 years of their tenure with us, we discovered just how far Georgia Tech had come. Tech has now been ranked among the nation’s top public universities for the past decade.

SLIDE: UNDERGRAD ED

The undergraduate experience has been enriched with expanded opportunities for research, study abroad, and leadership, as well as improved advising, academic support, and innovative interdisciplinary degrees. Our students have embraced these opportunities with enthusiasm. Two-thirds of our undergraduates are now engaged in special programs like the Research Option, the International Plan, the Leadership Plan, or the Co-op Program that enhance the value of their degree. And we expect that number to continue to grow.

SLIDE: NEW FACILITIES

Over \$1 billion in construction has more than doubled the square footage of our campus. We can now boast about stunning academic facilities like the Biotechnology Complex, the Klaus Advanced Computing Building, the Marcus Nanotechnology Building, which will soon open, and, of course, Technology Square. Student life has been enriched with the award-winning Campus Recreation Center, the Student Center Commons, and the shops and restaurants of Technology Square.

SLIDE: RESEARCH

The research enterprise has more than doubled, with a record-setting \$445 million in awards last year, putting us on track for annual expenditures of a half-billion dollars or more. Georgia Tech has always had an entrepreneurial personality, but focused attention to smoothing the path from research labs into the marketplace has increased the number of new companies Tech creates. As

a result, we now spin off about twice as many new companies as the typical university with a similar-sized research enterprise.

SLIDE: INTERNATIONAL GT

Georgia Tech's international reach has also expanded. The campus at Metz, France, blossomed into a full-fledged operation, with graduate and undergraduate education programs, growing research endeavors, and a wide range of partnerships with other European universities, as well as with industry and the French National Center for Scientific Research – Europe's largest scientific research organization. New international platforms with both facilities and Georgia Tech people opened in Shanghai in conjunction with Jiao Tong University and in Athlone, Ireland, where the Georgia Tech Research Institute partnered with the Irish Industrial Development Agency. Georgia Tech is moving forward to become one of the world's truly global universities.

Taken together, all of these achievements trace an upward trajectory for Georgia Tech that has been accelerating. It is a legacy of strategic growth that positions the Institute for even greater prominence in the future.

SLIDE: THE POWER OF PEOPLE

Wayne Clough may have played the role of an orchestra conductor in all of these accomplishments, but he was always the first to tell you that what made Georgia Tech great was the quality of the players. Georgia Tech's most valuable resource has always been its people, and that will continue to be true in the future. Some of the brightest, most energetic, determined, and entrepreneurial people in the world are gathered on Georgia Tech campuses. We celebrate them at every commencement ceremony, and any recitation of the Institute's success centers on them.

SLIDE: NEW YEAR

Of course, the process begins with attracting outstanding people to Tech, and this year is no exception. Our new freshman class is the smartest we have ever enrolled, reinforcing our reputation for having one of the highest quality student bodies of any public university in the United States. Most universities either increase their enrollment or they increase the caliber of their students. It is rare to do both at the same time, but that is exactly what Tech has done, as we have improved retention and graduation rates with an enhanced educational experience, and expanded our graduate program in step with our research enterprise. And the combination of exceptional talent and an exceptional educational experience continues to attract hundreds of companies to campus to recruit our students.

SLIDE: STUDENTS WIN SCHOLARSHIPS

Another measure of our students' ability to excel is the growing list of prestigious scholarships that they have been winning over the past several years. And last year was no exception. The list now features several new ones – the Morris Udall and George Mitchell Scholarships – in addition to names like Marshall, Goldwater, and Gates Cambridge that have been growing more familiar. And we were proud to welcome Apollo 13 Captain James Lovell to campus to present the Astronaut Foundation Scholarship to one of our own students.

SLIDE: FULBRIGHT

Three Georgia Tech students were named Fulbright Scholars and headed abroad for international research in fields ranging from urban migration to energy security to the psychology of pictorial warning symbols. A team of graduate students from Georgia Tech and Emory won recognition in two global business competitions for their business plan to launch a new company based on nano-engineered diagnostic technologies for cancer. And we were very proud when the 2007 Co-op Student of the Year for the nation turned about to be from Georgia Tech.

SLIDE: STUDENT ATHLETES

Division I-A athletics form an important part of the Georgia Tech experience. And no tribute to our outstanding students would be complete without mentioning our student athletes, who work very hard both in the classroom and on the courts and fields.

Sophomore Andrea McDowell made Georgia Tech history last spring by becoming the first Yellow Jacket ever to win an NCAA national singles tennis title. Her teammate Kristi Miller was named At-large Academic All-American of the Year by *ESPN The Magazine*, after she graduated in May with a 4.0 GPA.

In addition to the women's tennis team, Yellow Jacket teams in football, golf, baseball, softball, women's basketball, and men's track and field competed in post-season NCAA tournaments. In addition, five Georgia Tech teams – men's and women's cross country, softball, volleyball, and women's swimming – earned perfect scores on the NCAA Academic Progress Rate.

This year, we are pleased to welcome Paul Johnson as our head football coach. He is more than just a coach. He is also a teacher, and as such he fits very well into the spirit and tradition of Georgia Tech.

SLIDE: TRADITION OF EXCELLENCE

Our faculty is just as excellent as our students. Mostafa El-Sayed made history by becoming the very first faculty member at any college or university in the state of Georgia to receive the National Medal of Science. PECASE is the nation's top award for young faculty who are just starting their careers, and it is a special honor to be named among the world's top innovators under age 35 by MIT's *Technology Review*. At the other end of the career spectrum, membership in the National Academy of Engineering honors the achievements of an outstanding career.

SLIDE: FACULTY AWARDS

Our faculty members continue to win many prestigious awards and honors from a wide variety of national organizations, and you can see a few of them here. Georgia Tech ranks second in the nation in the number of faculty members who have won CAREER Awards through the years, and we are increasingly making our presence known among Sloan Fellows and the membership of the American Association for the Advancement of Science. The faculty members who are winning these awards are coming from a wide diversity of disciplines. Georgia Tech's engineering faculty members have long been winning such awards, which you would expect from one of the nation's top five engineering programs. But today faculty members across the disciplines of science, public policy, management, and architecture are joining them. And we are

very pleased that Georgia Tech is achieving its goal of excellence in the broad range of disciplines that characterizes a well-rounded institution.

SLIDE: INTERNATIONAL PROFILE

We are also seeing the expansion of our international prestige and opportunities for leadership. Our faculty are recognized around the world as leading experts in their fields, and moving into prestigious roles at major universities – such as Bill Koros at King Abdul University of Science and Technology, and Art Ragauskas at Chalmers University in Sweden. Georgia Tech Lorraine continues to raise its profile as a leader in Europe, and the European Union Commission renewed Georgia Tech's EU Center of Excellence, again choosing Tech from a strong pool of university competitors.

SLIDE: SUSTAINABILITY

As I looked back over the institutional achievements of the past year, a common theme running through them was sustainability. The honors you see here reflect the progress we have made on our three-fold goal of offering expertise in this critically needed field, educating our students to see their chosen discipline through the prism of sustainability, and operating our own campus in a sustainable manner.

SLIDE: CHALLENGES OF THE COMING YEAR

As these few highlights of the past year illustrate, Georgia Tech has much of which to be proud. But this is certainly no time to rest on our laurels. As that great American folk philosopher Will Rogers once said, "Even when you are on the right track, you'll still get run over if you just sit there." So I want to devote the rest of my talk to what lies ahead for Georgia Tech, beginning with the challenges of the current year.

Of course, one of the foremost challenges is finding the next president – someone who can continue Georgia Tech's upward trajectory and lead the Institute forward into another exciting new era. And the door barely closed behind the Cloughs as they departed for the Smithsonian Institution in Washington when the search began.

SLIDE: SEARCH UPDATE

The Georgia Tech community is well represented on the search committee, with representatives from the faculty, administration, student body, Alumni Association and Foundation, as well as several at-large members with close Georgia Tech ties. The committee began work in August and immediately engaged the services of William Funk and Associates. This internationally recognized search firm specializes in higher education and has conducted more than 300 searches for college and university presidents.

Bill Funk and the committee were here on campus last month to hold several open meetings that provided an opportunity for our campus community to describe the characteristics we are hoping for in our next president. The committee, together with Bill, has now begun the long process of identifying and evaluating potential candidates. This process is, and must be, strictly confidential, so we are not going to hear much about their work for a while. But if everything moves on schedule, sometime next spring they will have identified a short list of finalists from which the Chancellor and Board of Regents will choose Georgia Tech's next president. We are

hoping that person will arrive on campus next summer in enough time to get oriented before the new academic year begins.

SLIDE: YEAR OF PREPARATION

The members of the search committee are not the only ones with work to do this year. There is much for all of us to do to prepare for the arrival of our next president. First, this is a time to make sure our house is in order. Georgia Tech and each one of its faculty and staff hold a privileged position of trust. Parents entrust us with their most treasured asset – their children. Alumni and friends give generously with the expectation that we will use their gifts wisely and well. We also have an obligation to our corporate partners, and to the taxpayers of Georgia and the nation who entrust us with financial resources. So, as we prepare for a new era at Georgia Tech, we are using this interim time to review our administrative processes and make sure they serve us well and uphold the highest standards of ethics and integrity.

It is also in our best interest to help our new president get off to a running start, so each unit on campus – academic, research, administrative – is preparing a white paper. Beyond describing the function of each unit, these documents will also place each unit in the context of Georgia Tech's overarching Strategic Plan.

It has now been six years since we adopted a five-year Strategic Plan, so it is time to assess how well we have done in achieving the goals we set for ourselves. We also need to gauge how the changing context in which we operate has influenced those goals and reshaped our aspirations. These timely and carefully considered evaluations will lay the groundwork for developing a new strategic plan under the leadership of the next president.

SLIDE: GT OF FUTURE

As we think about aspirations for the future of Georgia Tech, there are also some constraints that we need to consider. For example, we have experienced strong enrollment growth over the past decade, and we are beginning to approach the capacity of our Atlanta campus. If we want to continue to grow both our enrollment and our research enterprise – and at least at the graduate level, these two go hand in hand – then we need to find ways to balance that growth against the physical constraints of our campus.

We have been fortunate to acquire additional real estate around the edges of our campus that made Technology Square and the North Avenue Research Area possible. But the reality is that we are in the middle of a major city, and acquiring more property is not an easy or inexpensive endeavor. We also value the green spaces on our campus, and they help us operate in a more sustainable way. So, how do we preserve the natural beauty and sustainability of our campus going forward?

There are no easy answers to questions like these, but as we think ahead to Georgia Tech's next strategic plan, it is important to begin giving serious consideration to the possibilities and the trade-offs, so that we can carefully plan our growth in ways that maintain the quality, beauty and sustainability of our campus.

SLIDE: CAMPAIGN

Some of you have asked what will happen to our \$1 billion capital campaign during the interim time. The answer is that the campaign is continuing to move forward. The progress of the campaign is driven by the efforts of many partners, all of whom are working as hard as ever. The slowing economy is actually having more of an impact on the campaign than the presidential search. But our donors are committed to Georgia Tech, and we are working closely with them to accommodate their need for a little more flexibility in these times of economic uncertainty. As we move forward through the interim period, the campaign will continue in quiet mode, and we expect the arrival of a new president to herald a new era in the campaign, just as in other aspects of life here at Tech.

SLIDE: BUDGET

Another challenge facing us this year is dealing with cuts in the state funding that makes up a quarter of our budget. All units of state government, including the University System of Georgia of which we are a part, have been asked to absorb a 6 percent cut in their state funds during the current year. Depending on how the economy performs, we may see additional cuts beyond that, either this year or next year, or both.

Cutting 6 percent from a quarter of your budget may not sound so significant, but our state funds are focused on the education of our students, which is the heart of our mission. As we absorb these cuts, our top priorities are to keep our resources focused on the academic core and to maintain the same level of excellence, so that quality is not sacrificed.

These cuts are a reality that we cannot change. We have no choice but to accommodate them. But everything, even a seemingly negative occurrence like this, contains an opportunity if you choose to find it and take it. Times of financial austerity provide an incentive to cast a critical eye on how we are spending our money. They offer an opportunity to find new ways to streamline our operations and make them more efficient. They call us to make sure that we spend our resources wisely and well – that we are getting the biggest possible bang for our bucks, and that our allocation of resources is aligned with our strategic goals. These tasks represent an important aspect of a well-managed operation.

Georgia Tech has always been nimble, practical, and entrepreneurial, and has often found innovative ways to do more with less than wealthier competitor institutions. This year will be no exception. As we move through this year of reassessing our progress and our aspirations, it is not a bad thing to also reconsider how we can best utilize our resources to further our goals. So we are taking the long view. Even as we cinch up our institutional belts, we are focused on consolidations and reconfigurations that will serve our long-term aspirations and prepare us to move forward quickly as the economy improves.

As we tighten our belts, I have worked very deliberately to keep the lines of communication open and seek the advice of Georgia Tech's campus community. I believe in Kevin Kelly's second law, which says that "nobody is as smart as everybody." And this is yet another area in which collaboration and teamwork will bring us out ahead.

SLIDE: FRAMEWORK FOR THE FUTURE

Much about the future is unknown. We do not know, for example, who the next president of Georgia Tech will be. And the formulation of the Institute's next Strategic Plan awaits the leadership of this person. But the outlines of the major problems and needs that will challenge the world for the next decade and beyond are increasingly clear, and we can see the places where our own strengths align with these problems and opportunities. So I would like to take a few minutes to discuss three of these broader challenges facing the world that offer Georgia Tech opportunities for leadership.

SLIDE: FRIEDMAN QUOTE

Energy and environmental sustainability comprise one of the thorniest and most pressing problems facing the planet. The fact that renowned *New York Times* columnist Tom Friedman thought of Georgia Tech and included us in a column he wrote last month about the need for federal investment in this critical field is indicative of the opportunity that lies before us to emerge as a leader. Here on this campus, we have the breadth of expertise to be a global leader. However, we must be strategic about orchestrating that expertise and seizing opportunities to bring our expertise into play.

For example, a few minutes ago, I mentioned the expanded international opportunities that have been awarded to Bill Koros and Arthur Ragauskas. Both of them are related to energy and sustainability, and are another indication of the leadership potential that lies before us.

SLIDE: WIDE RANGE OF SOLUTIONS

Georgia Tech has long taken an entrepreneurial approach to energy, with a focus on the development of alternative sources and technologies. For a while our efforts in this area were considered a little esoteric, but today the time is ripe for our work in alternative energy to play a more central role. These alternative technologies range from the next generation of solar cells to new battery and fuel cell technologies... from new technologies for producing biofuels to tiny nanogenerators that harvest energy from their surroundings to power small electronic devices.

At the same time, our significant research in the area of controlling carbon emissions has now gained the attention of mainstream fossil fuel industries, who are realizing the growing urgency of addressing this challenge. They are coming to us for our expertise in these technologies, which range from carbon separation and capture, to cleaner combustion techniques.

SLIDE: CLIMATE, POLICY

Even as Georgia Tech engineers work on new energy technologies, our scientists are gathering data that provide a greater understanding of climate change and the impact of global warming. And we are gaining attention for our expertise in these fields, with faculty increasingly quoted in news reports and testifying before Congress.

There is also no better place for the disciplines of science, engineering, and public policy to meet than around the issues of energy and the environment. These are complex issues, and there are few in Washington with the background or knowledge required to sort them out. Yet informed policy is essential for the future of our planet. And the ability of Georgia Tech to provide expertise was demonstrated by the contributions of faculty members Marilyn Brown, Robert

Dickinson, and Rong Fu to the work of the Intergovernmental Panel on Climate Change, which helped this organization win the Nobel Peace Prize.

SLIDE: INTERSECTION

For much of our history, no one used the words “Georgia Tech” and “medicine” in the same sentence, but we are increasingly becoming an important player in this arena. Our research initiatives are intersecting with medicine in many places, from helping hospitals to streamline their operations to speeding up the process of translating research discoveries into patient diagnosis and care.

But the newly emerging field that really aligns beautifully with our interests and expertise is at the intersection of medicine, nanoscience, and computing. And Georgia Tech’s genuinely interdisciplinary environment is an asset that is helping us assume leadership. Together with our partner, Emory University, Georgia Tech has moved quickly to the forefront in nanomedicine. We now need to be strategic about building on this initial flurry of activity to establish and solidify our ongoing leadership through the coming years.

At the heart of many future discoveries in nanomedicine is the application of computing to medicine. As scientists and engineers at Georgia Tech and elsewhere have developed an increasingly sophisticated array of technologies for gathering detailed data on the human body, the door of opportunity has opened for high-performance computing to step more fully into the medical arena. From figuring out how the protein products of the human genome work, to developing personalized medicine, predictive medicine, and new drugs, computing has a growing contribution to make to the development of the next generation of health care. And Georgia Tech is well positioned to lead the way.

SLIDE: MODELING

Which brings me to the third field where Georgia Tech’s expertise aligns well with a growing opportunity. Researchers have traditionally made discoveries through theoretical exploration and the collection of empirical data. To these traditional methods, we can now add a third – computer modeling.

High-performance computing models are the test-tubes of the 21st century. Supercomputers can model the behavior of anything that is too big, too tiny, too far away, or too dangerous to deal with in person – from exploding stars to individual atoms... from hurricanes and earthquakes to disease outbreaks.

Computer models are also tools for researchers to delve into a wide range of human-scale scenarios. Whether you are working on community planning, or developing policies that must succeed in the context of social systems, computer models offer an opportunity to explore the possible consequences of decisions or actions. Economists and investment managers are also increasingly turning to computers to model the complexities of today’s global economy.

The excellence of Georgia Tech’s College of Computing, which is ranked ninth in the nation, and our interdisciplinary climate position us to be a leader in developing a wide range of uses for computer modeling, even as Tech computing researchers simultaneously expand the power of

high-performance computing. And our new degree programs in computational science and engineering strengthen and leverage the interdisciplinary collaboration that enables the creation of computational models for solving important real-world problems.

SLIDE: POSITIONED FOR GREATER PROMINENCE

I am sure you can think of more areas where our strengths are closely aligned with needs and opportunities going forward. And when you add everything together, the bottom line is that Georgia Tech has not only grown in size and reputation over the past decade or so, but the strategic character of that growth has positioned us for even greater prominence. Significant opportunities are opening before us to apply our expertise to some of the world's most intractable challenges, and to make discoveries and develop technologies that improve the quality of life around the globe.

SLIDE: PHOTO-HEADLINE MONTAGE

Our most important resource in that task is the exceptional people who make up Georgia Tech. The people pictured here are some of the newsmakers from the past year. But each one of us here in this room today is a standard bearer for the quality and excellence that are the hallmarks of this university. One hundred twenty years ago this month – on October 3, 1888 – Georgia Tech opened its doors to its very first students. Today, we are the beneficiaries of the outstanding efforts of the many generations of students, faculty, and staff who have gone before us. Each of us is here today because we share that same commitment to excellence, and that is what will propel Georgia Tech to levels of prominence in the years ahead.